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SIMPSON, E.B.

Sir James Simpson's intro-  
duction of chloform. [1894]

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is the "blast and rumor" to which Isaiah refers as driving Sennacherib away from the walls of Jerusalem. Others, again, conjecture that an insurrection at home forced him to abandon the siege, and to return to Assyria with all possible speed. This latter supposition is supported by the fact that the next expedition of Sennacherib is directed against Babylonia. But whatever the cause of abandoning the siege may have been, it is certain that he did not carry out his plan. That Sennacherib does not tell us of the failure need not surprise us, for the Assyrian kings, with genuine official partiality, speak in their annals only of their victories, and never of the discomfitures they incurred.

The Second Book of Kings, in closing the narrative, says :

So Sennacherib returned to Nineveh. And it happened as he was worshiping in the temple of Nisroch, his sons Adrammelek and Sharezer killed him, and they fled to the land of Ararat. Then Esarhaddon his son reigned in his stead.

We now know that the murder of Sennacherib, which is here made to appear as though following directly upon the events narrated, did not occur until twenty years after the attack on Jerusalem. In an Assyrian-Babylonian chronicle which was discovered a few years ago among the tablets of the British Museum, we read the following confirmation of the murder :

In the month of Tebet [January], on the twentieth day, Sennacherib, the king of Assyria, was killed in an insurrection by his son.<sup>1</sup>

<sup>1</sup> Polyhistor and Abydenus also speak only of one son.

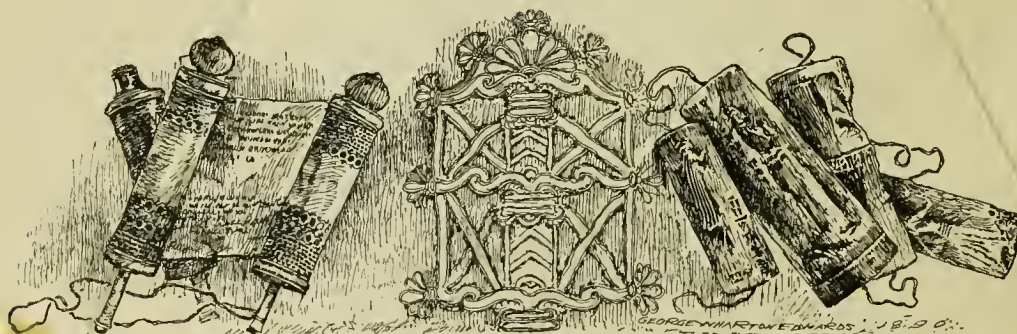
After an interregnum of six months :

In the month of Siman [May-June], on the eighth day, Esarhaddon, his son, ascended the throne of Assyria [680 B. C.].

As a further curious detail it may be noted that, incidentally, Ashurbanabal in one of his inscriptions speaks of the great bull-statue in the temple at Nineveh, where "my grandfather Sennacherib was murdered."

Both Esarhaddon (680-68 B. C.) and his son Ashurbanabal (668-26 B. C.) mention in their annals Manasseh, the successor of Hezekiah, as among the kings who pay tribute to them, but further than this we learn nothing in the cuneiform records from this time on concerning the Judean kingdom. After the death of Ashurbanabal, the Assyrian power begins to decline with great rapidity. Babylonia succeeds once more in obtaining the supremacy. Nineveh is destroyed, and under Nebuchadnezzar II. (604-562 B. C.) Babylon reaches the highest point in her development. Of Nebuchadnezzar a large number of inscriptions have been found, but they tell almost exclusively of the temples he erected, repaired, and enlarged, and of other building operations which he directed at Babylon and elsewhere. His annals giving accounts of his military expeditions still await the spade of the explorer. When these annals shall be found,—and there is every reason for hoping that they will be,—we shall no doubt read of his expedition against Judea, of the attack upon Jerusalem, of the destruction of the city, of the capture of King Jehoiachin, and of the carrying away of Judeans to "the waters of Babylon."

*Morris Jastrow, Jr.*



JEWISH SCROLLS.

SACRED TREE.

BABYLONIAN CYLINDERS.



## SIR JAMES SIMPSON'S INTRODUCTION OF CHLOROFORM.

BY HIS DAUGHTER.

I have drunken deep  
Of all the blessedness of sleep.

COLERIDGE.

*Cuth. Jan 1844*



DOOR OF DR. SIMPSON'S HOUSE, 52 QUEEN STREET, WHERE  
THE EXPERIMENTS WERE TRIED.

"THE old order changeth, yielding place to new," and science nowadays presses so rapidly onward that chloroform, after deadening pain for nearly half a century, may soon be superseded by some newer discovery. Before that time comes, before those who can remember when there was no blessed anodyne to annul suffering, and before those who assisted at the introduction of chloroform, are gone from us, it may be of interest to look back and recall the circumstances of its first employment, in 1847, by my father, Professor James Y. Simpson. Of the few who were then assisting him in his experiments to discover the drug most potent for anesthetic purposes, there survive only two, and from them I have gleaned the recollections of that event here recorded.

That an anesthetic drug of some kind had long been used, old records bear witness. Indian hemp had narcotic power, and it is supposed that from it was brewed the "wine of the condemned" referred to by Amos, 700 B. C. In an old Chinese manuscript one Hoathoa, A. D. 300, mentions the use of a decoction of hemp which he gave to one patient who was to undergo an operation; at the end of some seconds the patient became as insensible as if he were drunk, or deprived of life, and after a cer-

tain number of days he found himself reëstablished without having experienced the slightest pain during the operation. Homer tells how Helen "straightway cast into the wine a drug that frees men from grief and from anger, and causes oblivion of all ills. Such cunning and excellent drugs the daughter of Jove possessed, which Polydamna, the wife of Thon, gave her, an Egyptian." Pliny, speaking of mandragora, says, "It has the power of causing sleep in those who take it. It is taken against serpents, and before cuttings and puncturings, lest they should be felt." One De Lucca, living at the end of the thirteenth century, tells how he compounded a sleeping-draught, and describes how the sponge is to be saturated with it, and adds, "As oft as there shall be need of it, place this sponge in hot water for an hour, and let it be applied to the nostrils of him who is to be operated on until he has fallen asleep, and so let the surgery be performed." The greatest step toward the introduction of an anesthetic, however, was made by Sir Humphrey Davy, who many times in the last year of the last century experimented upon himself with nitrous oxid gas, and further found that headache and other pains disappeared under its influence. Faraday in Great Britain, and Godman in America, showed as the result of their observation and experience that the effects on the nervous system of the inhalation of the vapor of sulphuric ether were quite similar to those produced by the inhalation of the vapor of nitrous oxid gas. Dr. Morton of Boston got the idea into his mind that sulphuric ether might prove successful, and verified the speculation September 30, 1846, by a dental operation on Eben Frost, and fixed that date as an era in science.

When James Young Simpson was only a student in his teens, the agony of a woman under the knife, though in the skilful hands of Mr. Liston, horrified him in such measure that from beholding her torture (which was torture also to his sympathetic nature) he went to seek work in the courts of law rather than to suffer more in the school of medicine. He, however, never became a writer's clerk. The student lad turned

his flying footsteps from the Parliament House back to the study of the healing art, and from that hour he resolved, when he became enrolled in the ranks of medicine, to devote himself to mitigate in some manner the dreadful agonies which were endured within the grim walls of the Royal Infirmary. After years of toil, when work, which he said was "the whole secret alchemy of professional success," had brought him not only fame but a title, he was called upon to choose a badge and motto. The healing rod of Æsculapius became the crest of the baronetcy he founded, and his motto was "Victo Dolore" (Pain Conquered). The symbols thus adopted toward the end of a life of hard work had been his for over forty years. The serpent-twined rod of Æsculapius had been in his hands a magician's wand to cure the sick, and his chief thought had been to find a weapon wherewith to fight and to conquer pain.

Early in my father's career his attention had been attracted to mesmerism. The question he asked himself was, Might not the fulfilment of his anesthetic dreams lie in that direction? Knowledge of the powers of hypnotism has gained such ground of late that it now seems as though in the future it might be the means used to wrap the suffering in the mantle of "death's twin-brother — sleep"; but in 1837 the knowledge of it was in its infancy among medical men. As usual, however, the young Edinburgh doctor was on the alert to try any new thing.

"I was a great sceptic four weeks ago," he writes about mesmerism in 1837, "and laughed at it all, but I have seen enough to stagger me. Yesterday, for instance, I magnetized a young woman by waving my hand only in a looking-glass, behind her back, in which her shadow was reflected, and she was so sound you could not wake her by pinching, tugging, etc., as severely as you pleased. It would have taken place, I believe, just as well if the looking-glass had not been there; but I tried the experiment with it to please some one present. I have all the principal medical men here seeing it done at my hospital." He did not pursue mesmerism further in the way of an anesthetic at the time, but he often exerted his powers with it. One day at luncheon he commanded a lady whom he had mesmerized to remain silent till he gave her back the power of speech. Along with his other guests he was laughing at her compulsory dumbness when he was called from the room, found he was urgently wanted at a distance, caught a train, and was absent a few days. Meanwhile he quite forgot his dumb victim, but on his return home, weary with his journey, he was forcibly reminded of her by many written messages to come at once. Conscience-smitten at having neglected her, he

hurried off immediately. On returning home, when he was asked if he had given her back the power of speech, he replied: "Yes. I almost wish I had n't, for her tongue, being silent for so long, and her anger bottled up on the tip of it, I got it all."

Being a reader of divers subjects, and having a retentive memory, which stored all information in his weighty brain, he noted whenever he read (and he snatched every spare moment to read) in ancient history or bygone poets of any "show of death." These lines in a poem of Middleton's (1617) interested and puzzled him:

I'll imitate the pities of old surgeons  
To this lost limb — who, ere they show their art,  
Cast one asleep, then cut the diseased part.

Working to pay off a "frightful load of debt," which he calls the £500 he owed his well-loved elder brother Sandy for his education, and for his start in life in the little house in Dean Terrace, he had not the time he craved to devote to experiments and discovery. He had given hostages to fortune, too, which kept him all the more zealously busy and anxious first to earn daily bread, then name and fame. "I look upon it as a good augury," he used to say laughingly, in these days, "that Stockbridge, Success, and Simpson all begin with S."

In 1846, when word came from America that sulphuric ether had been found an efficient anesthetic, his heart bounded within him. From his earliest days, when once he had work in hand, he was keen to go on till it was finished, and finished to the best of his ability. Whatever his hand found to do, he did not only with his whole might but with a persistent adroitness which overcame all barriers. He also had an ingenious knack of supplying the necessary tools for any work he had on hand, a readiness of resource which stood him in good stead throughout life. Once when he wanted to stop a rattling window, taking what came readiest to hand out of his pocket, which happened to be a £10 note, he found it an effectual pad. A friend recalled to me lately another example of his quickness of resource. A patient of his was under chloroform, when, owing to a kettle having been upset, the supply ran short. To save life it was necessary to have more immediately. Those around were in despair, till my father quickly cut out the saturated square of carpet, and by its help kept his patient under the anesthetic.

This faculty of ready resource rendered him apt to try anything new. Still brooding over the discovery of a panacea for suffering, my father grasped the greatness of the step when Sir Humphrey Davy's nitrous oxid gas came back to us strengthened by American growth. This



sulphuric ether was first used in surgery October 16, 1846, in the Massachusetts General Hospital, under Dr. Morton's supervision. Dr. Simpson was eager for details, eager to try it. "I can think of naught else," he wrote to his brother Sandy, referring to the first use by any one of anesthesia in midwifery. In a letter to his brother dated January, 1847, he tells of being appointed one of her Majesty's physicians for Scotland, saying: "The Duchess of Sutherland sent me an extract from a letter of her Majesty to her Grace, saying, that she (the Queen) would nominate me, 'which' (to quote the Queen's note) 'his high character and abilities make him very fit for.' Flattery from the Queen is perhaps not common flattery, but I am far less interested in it than in having delivered a woman this week without any pain while inhaling sulphuric ether." He wrote to the "Monthly Journal of Medical Science" of this bold and successful venture in first using ether in his practice. Writing to a medical friend in India, he says: "I have sent you a short paper on ether. *All* here use it in surgical operations, and no doubt in a few years its employment will be general over the civilized world. We do not yet know who was the original suggester—Mr. Hickman, Mr. Wells, Dr. Jackson, or Dr. Morton. But it is a 'great thought,' if ever there was one. With many other medical men, I have taken it myself to try its effects. It is the only just way of judging of it."

To bring the American invention into more general notice and practice was a task at which Professor Simpson joyfully worked, and while the year 1847 was still young he was using it successfully in his own obstetrical practice. From his student days he was well accustomed to work into the early hours of the morning. His letters to my mother during their brief engagement are all dated midnight, and 1, 2, and sometimes 3 A.M. Throughout his life, except when confined to his bed by illness, these late or early hours were the ones in which he wrought with his pen. During the summer of 1847, with his mind filled with his impending discovery, he and his assistants "toiled upward in the night."

One who was often with my father at the time told me that all through the summer he kept repeating the lines:

Not poppy, nor mandragora,  
Nor all the drowsy syrups of the world,  
Shall ever medicine thee to that sweet sleep.

"Romeo and Juliet" was frequently studied, with much speculation as to what it was with which the priest had lulled Juliet into so close a semblance of death. He thought much, also, on the lines in "Cymbeline":

But there is  
No danger in what show of death it makes,  
More than the locking up the spirits a time  
To be more fresh, reviving.

Had Shakspeare, he wondered, in that stupendous brain of his, any idea of a narcotic which could do this deed?

It was a time of great interest in the little house in Dean Terrace. Round the table in the well-known dining-room, where my father loved to welcome at luncheon all sorts and conditions of men of hostile nations and creeds, and where, by the sympathetic sunshine of his presence, he often melted antagonistic natures into genial friendliness, it was his custom every evening to have an anesthetic séance. In company with Dr. George Keith and Dr. Mathews Duncan, he there tried various compounds of a narcotic nature with a boldness not to be daunted by the thought that the experimenters might cross the boundary of unconsciousness never to return. Professor Miller says:

Other ethers, essential oils, and various gases, chlorid of hydro-carbon, acetone nitrate, oxyd of ethyl, benzin, the vapor of iodoform, etc., were tried. Each "operator," having been provided with a tumbler, finger-glass, saucer, or some such vessel, about a teaspoonful of the respirable substance was put in the bottom of it, and this again was placed in hot water, if the substance happened not to be very volatile. Holding the mouth and nostrils over the vessel's orifice, inhalation was proceeded with, slowly and deliberately, all inhaling at the same time, and each noting the effects as they advanced.

One of the servants named Clarke was much interested in these experiments. One fluid, prepared with chloric ether in aerated water, looked like champagne. Clarke captured some of this, and offered the glass to the cook, who, drinking it hastily, fell down unconscious before the merriment Clarke was trying to stifle had time to grow into a laugh. He burst into the dining-room affrightedly, saying, "For God's sake, sir, come down! I've pushioned the cook." The startled experimenters hurried to the kitchen, and quickly restored the cook to consciousness. Thereafter Clarke was chary and contemptuous of any other concoction, and used to repeat stubbornly the sentiment, "Chlory's the thing." These meetings aftersupper went on till November 4, 1847, when chloroform was tested and found sufficient.

The four contemporary accounts of the first trial of chloroform which I have been able to collect are from the two remaining survivors of those who were present, together with my father's in a letter and Professor Miller's from "hearsay" at the time. They vary in small details, but, as Dr. Keith says, in speaking of

Professor Miller's account, "Tales change in the telling." During the autumn Professor Miller would come in every morning about breakfast-time, for, he used jokingly to say, he could not rest till he was sure none of the experimenters was dead. He says:

On returning home after a weary day's labor, Dr. Simpson, with his two friends and assistants, Drs. Keith and Mathews Duncan, sat down to their somewhat hazardous work in Dr. Simpson's dining-room. Having inhaled several substances, but without much effect, it occurred to Dr. Simpson to try a ponderous material which he had formerly set aside on a lumber table, and which, on account of its great weight, he had hitherto regarded as of no use whatever. It happened to be a small bottle of chloroform. It was searched for, and recovered from beneath a heap of waste paper, and, with each tumbler newly charged, the inhalers resumed their vocation. Immediately an unwonted hilarity seized the party; they became bright-eyed, very happy, and very loquacious, expatiating on the delicious aroma of the new fluid. The conversation was of unusual intelligence, and quite charmed the listeners—some ladies of the family and a naval officer, a brother-in-law of Dr. Simpson. But suddenly there was a talk of sounds being heard like those of a cotton-mill, louder and louder; a moment more, then all was quiet, and then a crash. On awaking, Dr. Simpson's first perception was mental. "This is far stronger and better than ether," said he to himself. His second was to note that he was prostrate on the floor, and that among the friends about him there was both confusion and alarm. Hearing a noise, he turned about, and saw Dr. Duncan beneath a chair; his jaw had dropped, his eyes were staring, his head was bent half under him; he was quite unconscious, and was snoring in a most determined and alarming manner. More noise still, and much motion. And then his eyes overtook Dr. Keith's feet and legs making valorous efforts to overturn the supper table, or more probably to annihilate everything that was on it. I say "more probably," for frequent repetitions of inhalation have confirmed, in the case of my esteemed friend, a character for maniacal and unrestrained destructiveness always under chloroform in the transition stage.

On December 3, 1847, my father, in a letter, writes:

On the first occasion on which I detected the anesthetic effects of chloroform, the scene was an odd one. I had had the chloroform beside me for several days, but it seemed so unlikely a liquid to produce results of any kind, that it was laid aside, and on searching for another object among some loose paper, after coming home very late one night, my hand chanced to fall upon it, and I poured some of the fluid into tumblers before my assistants, Dr. Keith and Dr. Duncan, and myself. Before sitting down to supper we all inhaled the fluid, and were all "under the mahogany" in a trice, to my wife's consternation and alarm.

In another letter he says:

I had the chloroform for several days in the house before trying it, as, after seeing it such a heavy unvolatile-like liquid, I despaired of it, and went on dreaming about others. The first night we took it simultaneously, and were all "under the table" in a minute or two.

My aunt, Miss Grindlay, and Dr. George Keith are the only two survivors of the little company on that November night. Miss Grindlay persists in the statement that my father tried the drug first alone. Her memory is now, at upward of four-score years, somewhat dimmer and less trustworthy than of yore, but for the last twenty years she has told the same tale. She says my father came into the room with his short, brisk step, and took out of his waistcoat pocket a little phial, and, holding it up, said, "See this; it will turn the world upside down." Helping himself to a tumbler off the sideboard, he poured in a few drops, inhaled it, and fell unconscious on the floor, to my mother's horror. Another sister of hers, Mrs. Petrie, and her husband, Captain Petrie, were present. This does not coincide with the previous statements, but it may be that my father, having got the impatiently looked-for chloroform (for after having expected it from Liverpool, he had obtained it at Duncan & Flockhart's), and being disappointed in its appearance, and being busy trying other things, had put it aside, till, thinking over it, he unearthed it, sniffed at it, and made the trial my aunt speaks of. Finding it efficacious, he may have pushed it among his papers again, with a glint of fun in his eyes and a cautioning "don't tell," pleased at the idea of the effect it would have on his comrades, Duncan and Keith. It is possible that Miss Grindlay may have confused this scene with another, though to have done so is unlike her usual accuracy and precision of recollection. My cousin, Miss Petrie, mentions in some notes made at the time, "On one occasion he [Professor Simpson] took something that rendered him quite insensible for upward of two hours. My aunt [Mrs. Simpson] got a terrible fright. *He tried everything on himself first.*"

Dr. George Keith, in a letter to me on the subject written in 1891, says:

Dr. Miller, in the appendix to his work on surgery, published soon after, gives a full account of the scene. It is pretty correct, only he says that we all took the chloroform at once. This, with a new substance to try, would have been foolish, and the fact is I began to inhale it a few minutes before the others. On seeing the effects on me, and hearing my approval before I went quite over, they both took a dose, and I believe we were all more or less under the table together, much to the alarm of your mother.



Your mother was present at the first trial of chloroform, besides your father, Dr. Mathews Duncan, and myself. Several other gases were tried by one or more of us, your father being anxious to find something better than ether, which had been used for about a year before, and which came from America—that is, the use of it as an anesthetic. It was not then made pure, as it now is, and the smell was a great drawback. The nearest to chloroform which was tried before this was chloric ether, a new remedy for sickness which had lately come from America. It was not strong enough, but one day your father was talking to an old friend from Bathgate, who was head of a pharmaceutical establishment, Wishart, in Liverpool. He mentioned that he made chloric ether, not in the usual way, but by first making pure chloroform (a curious liquid long ago discovered by Dumas, but not turned to any use), which he diluted with alcohol to make chloric ether. He promised when he went home from his holiday to send some of it down, as likely stronger than the ether. It was so long in coming that your father got a little from Mr. Hunter of Duncan & Flockhart, and it was this, not more than half an ounce, I think, which we first tried.

What makes it very probable that my aunt is correct in saying that my father had a private test of chloroform before a select audience before the trio took it is the statement of Dr. Keith that he (Dr. Keith) took it a few minutes *before* the others, because my cousin, in her reminiscence of that time, underlines the statement, “He [my father] tried everything on himself first”; and Dr. Lyon Playfair, in 1883, speaking on vivisection in the House of Commons, corroborates this statement. He says:

Sir James Simpson, who introduced chloroform, that great alleviator of animal suffering, was then alive, and in constant quest of new anesthetics. He came to my laboratory one day to see if I had any new substances likely to suit his purpose. I showed to him a liquid which had just been discovered by one of my assistants, and Sir James Simpson, who was bold to rashness in experimenting on himself, desired immediately to inhale it in my private room. I refused to give him any liquid unless it was first tried upon rabbits. Two rabbits accordingly were made to inhale it, and quickly passed into anesthesia, and soon recovered from it, though by an after action of the poison they both died in a few hours. Now, was this not a justifiable experiment on animals? and was not it worth the sacrifice of two rabbits to save the life of the most distinguished physician of his time, who by the introduction of chloroform has done so much to mitigate animal suffering?

Being “bold to rashness,” as Dr. Playfair testifies, my father was not likely to have let any one get ahead of him, even by a few minutes; but if he had first tried the anesthetic privately on himself, he would have been the more ready to observe the “overture to the swooning dream

of chloroform” enacted by his friend Dr. Keith. Professor Miller thus depicts the awakening of the trio from their early experiment:

By-and-by, Dr. Simpson having regained his seat, and Dr. Duncan having come to an arrangement with the table and its contents, the sederunt was resumed. Each expressed himself delighted with this new agent; and its inhalation was repeated many times that night,—one of the ladies gallantly taking her place and turn at the table,—until the supply of chloroform was fairly exhausted. In none of the subsequent inhalations, however, was the experiment pushed to unconsciousness. The first event had quite satisfied them of the agent's power. Afterward they held their wits entire, and noted the minor effects on themselves and each other. The festivities did not terminate till a late hour—3 A. M.

The small stock of chloroform was quickly used. Professor Miller says:

Mr. Hunter of Duncan, Flockhart & Co. was pressed into the service of restoring the supply, and from that day and hour there was for many months no respite for that gentleman. Working with an ordinary retort, he could not make chloroform fast enough for the consumption of Dr. Simpson and his friends in their professional practice; and relief only came with the better mode and larger scale of production.

Miss Grindlay remembers the trio under the table that November night—how my father and Dr. Mathews Duncan lay sleeping heavily, and how Dr. Keith, who had not taken so kindly to the drug, raised his head in a ghastly semiconscious state above the table, and with the uncanniness of his expression and his staring eyes further startled the already frightened audience. Later, when they took it in a smaller quantity, he used to be an obstreperous subject, insisting that the sideboard was a partner to whom he was engaged to dance, and trying to drag this stolid wallflower into the middle of the floor with a successful display of force which astonished the onlookers. Miss Agnes Petrie, my mother's niece, was the first woman who took chloroform, and under its influence was found to imagine herself an angel. My father, wishing to display the power of the new drug, often pressed her into the service, especially to assure patients of the gentler sex that the drug produced not only a harmless, but a beatific state of unconsciousness. My aunt had been so affrighted at the first trial which she witnessed of chloroform that she absolutely refused to inhale it, and to this day has never been under its influence.

This chloroform, which was tried and welcomed as an anesthetic at Queen street in 1847, was discovered at nearly the same time by Guthrie in America (1831), by Soubeiran





*J. Y. Simpson*

SIR JAMES YOUNG SIMPSON.

DRAWN BY F. L. M. PAPE. (BASED ON A PHOTOGRAPH BY J. MOFFAT, EDINBURGH, TAKEN ABOUT 1868.)

in France (1831), and by Liebig in Germany (1832). It has been used internally. Guillot employed it in asthma. Says my father in a pamphlet published in 1847:

My friend Dr. Formby of Manchester told me about two years ago that he often used it in a diluted form as a diffusible stimulant, and I have frequently prescribed it instead of valerian camphor. But I am not aware that any person used chloroform by inhalation, or discovered its remarkable anæsthetic properties, till the date of my own experiments.

After that memorable 4th of November, trials of various other ingredients proceeded

nightly at 52 Queen street. The results were not altogether satisfactory to those who partook of them. A compound of carbon which my father tried resulted in an irritation of the throat and windpipe, and Dr. Keith remembers that he had to be kept for hours under chloroform before he got relief. Another time, as my cousin Miss Petrie mentions, he was, to my mother's alarm, insensible for two hours after taking some strange compound. After this, the butler Clarke stuck to his assertion: "Chlory's the best," more firmly than ever."

One night trial was made of a mixture of chloroform and champagne. After waiting an hour, finding that it had no effect on himself

others, my father went to bed. Dr. Duncan, who had taken a larger quantity than the rest, also went off to his room. My mother and Miss Petrie were sitting up, reading, when they were suddenly startled by a loud cry from above. Rushing to the staircase, they beheld Dr. Duncan, half-dressed, clinging to the railing, talking volubly, and giving utterance to the most unearthly cries. He addressed himself: "I say, Duncan, how! Now, Duncan, make a noise!" and he obeyed these requests with a vengeance. My mother hurried up to rouse my father, who had slept through the disturbance the sleep of the weary. They had considerable difficulty in getting Dr. Duncan back to his room, and he was ill for some days after.

The first public trial of chloroform in surgical operations was on November 15, in Edinburgh, on three cases treated by Drs. Miller and Duncan, and curiously enough, as my father records, "Professor Dumas, the chemist who first ascertained and established the chemical composition of chloroform, was present, and in no small degree rejoiced to witness the wonderful physiological effects of a substance with whose chemical history his own name was intimately connected."

Before this public test of it, chloroform, on the eve of its *début* as an anesthetic, had a very narrow escape from being regarded as a fatal failure. On November 13 it was to be tried in the Royal Infirmary, but my father, who was to administer it, was not able to be present. He was much annoyed that press of work had detained him, but the divinity that shapes our ends was at work that day in keeping him from his appointment. The operation went on without an anesthetic, and the subject died suddenly after the first incision of the surgeon's knife. The public test spoken of, which took place two days later, met with success, and from that time, we may say, a reformation began in the operating-hospitals through the use of what Dr. John Brown in "Rab" calls "one of God's greatest blessings to his suffering children."

In these early days of the new boon to the suffering, life went merrily as well as busily in the house of its birth. Assured of its merits, rejoiced at the pain it would ease, its discoverer was full of sanguine hopes for its success. Ere many weeks had passed, however, he found he would have to do battle for his gift to mankind, if it was to live and prosper in this world of opposition and prejudice. Convinced that the beginning had been made in drawing the sting from pain, that those who heretofore had had hours of agony before them could pass through these bitter times in painless oblivion, he employed his pen to spread its uses and merits. Brimming over with enthusiasm, his great mind ever open and on the alert for anything

which led onward, his blood boiled with impatience when others, blinded by petty jealousy, did not see ahead as he did with an almost prophetic sight. One who knew him truly says that though he disliked controversy, he was ever ready to fight "till he had secured what he believed to be the triumph of truth. More than once he showed his readiness to do battle for a bitter enemy who, for the time, was upholding the honor of his profession, or the interests or dignity of science." The "straight line of duty" for him lay not in "sequestered nooks, and all the sweet serenity of books"; but his path being among the perplexing throng of the busy world, he was always ready to cut his way through it with his weapons, the lancet and the pen.

Speaking in 1890, and looking back on the history of surgery, Mr. Lawson Tait says:

We are apt to ignore the fact that all our brilliant advancements of to-day could never have been arrived at but for chloroform. We could never have developed the splendid work of modern surgery but for the genius and indomitable fighting qualities of James Young Simpson, who threshed out the victory of anesthesia, and gave us the anesthetic which for more than half a century has held its own against all comers. This, the greatest of all medical triumphs, at once broke down the barriers which had hindered the development of our art, and a vast change in surgical practice became apparent.

The battle for anesthesia was a hard and a lasting fight. Prejudice set her narrow face against chloroform, as she had done at the end of last century against vaccination, which made Jenner the means of saving more lives than Napoleon's sword destroyed. It is difficult to realize that people had to be persuaded into avoiding pain, but there were many who even objected to its alleviation, and held with M. Magendie, the distinguished physiologist, in the French Academy of Sciences, that "pain has always its usefulness, and it was a trivial matter to suffer, and a discovery to prevent pain was of slight interest only."

The war was directed not so much against its use in surgery as in midwifery. In the latter it was said to be unscriptural, and contrary to divine commands. This quotation from a clergyman's letter is a fair sample of many others, and shows the spirit of the time. It was, he said, "a decoy of Satan, apparently offering itself to bless woman, but in the end it will harden society, and rob God of the deepest cries which arise in time of trouble for help." The religious objection was based on Gen. iii. 16, "Unto the woman he said, I will greatly multiply thy sorrow and thy conception; in sorrow thou shalt bring forth children," etc. In the postscript of a letter to a friend in Liv-

erpool, written November 14, 1847, my father expressed in a condensed form his views and arguments on this point:

By the by, Imlach tells me Dr. P—— is to enlighten your medical society about the "morality" of the practice. I have a great itching to run up and pound him. When is the meeting? The true moral question is, "Is a practitioner justified by *any* principles of humanity in not

the Israelites kept their covenant. See Deut. vii. 13, etc. . . Besides, Christ in dying "surely hath borne our griefs and carried our sorrows," and removed "the curse of the law, being made a curse for us." His mission was to introduce mercy, not sacrifice.

Looking back after fifty years, the world to-day wonders that every one did not agree with Dr. Chalmers, who, when asked to write a de-



ENGRAVED BY T. JOHNSON.

LADY SIMPSON, A SPECTATOR OF THE FIRST TRIAL OF CHLOROFORM. (FROM THE PORTRAIT BY ARCHER, 1846.)

using it?" I believe every operation without it is just a piece of the most deliberate and cold-blooded cruelty.

He will be at the primary curse, no doubt. But the word translated "sorrow" is truly "labour," "toil," and in the very next verse the very same word means this. Adam was to eat of the ground with "sorrow." That does not mean physical pain, and it was cursed to bear thorns and thistles, which we pull up without dreaming that it is a sin. God promises repeatedly to take off the two curses on women, and on the ground, if

fense of anesthesia from a religious point of view, replied that he did not see any theological part pertaining to it.

The next point attacked was the fatality of chloroform, and in 1852 its introducer again had to take up his pen to defend its character. At the end of a paper answering this charge, he says,

The number, for example, of lives lost yearly by the poisonous effects of opium, etc., is much



greater than that lost by chloroform. At our different drug-manufactories in Edinburgh we have upward of two million doses of chloroform manufactured annually, yet how rarely does a fatal result follow its use! Is there any other common or potent drug which could be given in full doses in two million of instances per annum with greater impunity?

To guard against a fatal case, he always advised and administered the purest and best chloroform, prescribing quiet for the patient, and insisting that the dose should be given without timidity and in sufficient quantity to render the patient quickly insensible. Amid the crowd of work which hemmed him in, with characteristic energy and perseverance he collected statistics of fatal surgery and midwifery cases before and after the use of chloroform; he was sure that the wearing fear which beset a patient previous to undergoing pain, in addition to the enduring of it, undermined the nerves and constitution and increased the death-rate.

Sir James Clarke, her Majesty's physician, wrote to him in 1853, thanking him for a book. "You certainly are the most industrious man in the profession. It is really surprising that with your extensive and harassing practice you can find time to bring forth a volume every year." He goes on to say that the Queen had used chloroform in her late confinement, and adds truly, "I know this information will please you, and I have little doubt it will lead to a more general use of chloroform in midwifery practice in this quarter than has hitherto prevailed."

It was very near the end of Professor Simpson's life, at the age of fifty-nine, when the early spring of the year of 1870 found him confined to his room, that an attempt from America was made to deprive him of his hard-won honors in regard to chloroform. To his sickbed, piled with books, and still the center of his professional activity, came the criticism of Dr. Bigelow, directed against my father's omission to mention the American discovery in a general reference to the subject, in the course of his response to the speech of Lord Provost Chambers on presenting to him the freedom of the city in which he had lived and worked.

Concerning this controversy Professor Simpson wrote:

I know from the utmost depths of my own conscience that I never said or wrote a single word to detract from the mightiness of the discovery of anesthesia by sulphuric ether. But surely the dis-

covery of another anesthetic by me a year afterward, more powerful, practical, and useful than sulphuric ether, was in itself a fact of no small moment, and tended, I well know, immensely to spread the use of anesthesia on this side of the Atlantic.

My father answered Dr. Bigelow in two clear explicit letters (bound up among his posthumous papers), in which he said:

The history of anesthesia has always taken me a full hour in my University lectures; and in these lectures I have year after year paid heartily every due compliment to the most important part borne in the consummation of the practical applications of anesthetics by America, particularly by the cities of Hartford and Boston, and specially by the energy and genius of Dr. Morton.

And again:

Inoculation was an idea brought from Asia and Turkey and acted on in England in the beginning of the last century. Ere, however, the century was closed, a new variety of matter was proposed to be inoculated by Dr. Jenner, and proved infinitely a greater success. That vaccination was thus a modification of smallpox inoculation has never been allowed to detract one iota, I believe, from the merit of the great pathological and practical revolution produced by Dr. Jenner. The two discoveries have never clashed and been entangled together; for they were in our country upward of half a century or more separate from each other in the date of their introduction and discovery. Neither, I think, would the relative merits of the two anesthetics, the American sulphuric ether and the English chloroform, have co-mixed in the manner in which they have been confused by you and others, had their discoveries been separated by upward of half a century also.

In Boston has been erected a monument inscribed: "To commemorate the discovery that the inhaling of ether causes insensibility to pain; first proved to the world at the Massachusetts General Hospital at Boston, October, A. D. 1846." At Westminster, on my father's bust, are the words: "To whose genius and benevolence the world owes the blessings derived from the use of chloroform for the relief of suffering." Below the date of his death (May 6, 1870) might fitly be engraved his motto, "Victo Dolore," for before his letter on anesthesia had reached America he had been accorded rest by him "who giveth his beloved sleep," and so had obtained an everlasting victory over pain.

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